GUIDELINE 37 - ENVIRONMENTALLY FRIENDLY AUTO AND METAL SALVAGE FACILITIES

NORTH DAKOTA DEPARTMENT OF HEALTH — DIVISION OF WASTE MANAGEMENT
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Introduction

Motor vehicle and metal salvage facilities provide an important outlet for the reuse and recycling of materials associated with automobiles, appliances, equipment, and other metal goods. During the salvaging process, solid wastes (some of which can be toxic to human health and the environment) are stored, handled, and sometimes released into the environment. Because of actual and potential impacts to human health and the environment at or near these types of facilities, operators need to be aware of the salvaging industry's best management practices. In today's business climate, environmental liability associated with property is a concern to potential land purchasers, realtors, lenders, neighbors, etc., as well as to environmental and health professionals. By following some easy guidelines and cleaning up any spills or releases in a timely manner, such concerns can be minimized. It is recommended that salvage facility operators keep records on waste management and recycling activities. The purpose of this guideline is to assist salvage yard owners, operators, and employees to manage their facilities in an environmentally friendly manner, thereby reducing potential impacts to human health and the environment, and also to minimize potential long-term environmental liabilities.

Leaks and Spills

Liquids released from automobiles and equipment can and do cause serious surface and ground water pollution. Spill prevention is probably the single best management practice used to avoid expensive cleanup costs at salvage facilities. Therefore, the Department recommends the following:

1. Inspect vehicles and other items for leaks.

2. Locate drip pans under leaks and then reuse, recycle or properly dispose of the fluids.

3. Store captured fluids in proper containers with labels.

4. Inspect storage containers for leaks.

5. Drain fluids from vehicles and equipment before salvaging or crushing.

Spilled liquids should be promptly collected into a container. Even small spills of materials can accumulate to contaminate surface and ground water. Residue or contaminated soil should be solidified with an absorbent material (sorbent pads, booms, cat litter, etc.) and placed in a covered waste container for disposal at a Departmentally approved landfill. Landfills will not accept liquids for disposal. Contact the disposal facility or the Department for proper guidance for disposal. In the case of large spills and/or emergency release, contact the Division of Emergency Management at 701-328-2121 or toll free at 1-800-472-2121.

Fluids

Fluid releases to the environment generally occur when vehicles and equipment are being disassembled or crushed. Fluids contained within the following devices can cause damage to human health and the environment if improperly handled or disposed:

- Air conditioning units
- Batteries
- Brake lines
- Engines
- Differentials
- Filters
- Fuel tanks
- Heater cores
- Lines/hoses
- PCB-containing devices
- Radiators
- Torque converters
- Transformers
- Transmissions
- Window-washing fluid tanks

Use containment tools such as drip pans when disassembling hoses, filters, and other devices. All fluids must be contained. The Department recommends draining the above devices shortly after the vehicle or equipment arrives at the facility. Parts-cleaning equipment and their fluids also merit attention. The above devices or their contents can almost always be recycled or reused.

Waste Handling, Storage, Recycling, and Disposal

Used Oils

State law prohibits the landfill disposal of used oil. Used oil includes, but is not limited to, the following petroleum-based liquids:

- Used oil
- Brake fluid
- Transmission fluid
- Power steering fluid
- Differential oil
- Transaxle fluid
- Other gearbox oils
- Greases

The above-noted used oils can often be mixed and containerized together. Check with a used oil outlet for their requirements. Used oil containers must be labeled “Used Oil.” Do not mix other materials with used oil. Ordinarily, used oil may be burned for energy recovery in used oil-fired space heaters or recycled.

Used Oil Filters

Used oil filters must be hot drained, and either punctured, dismantled or crushed. Once the used oil is removed, recycle the separated scrap metal and used oil.

Lead-Acid Batteries

Lead is toxic to humans. Lead-acid batteries must be used for their intended purpose or recycled. Do not drain or break lead-acid batteries. State Law prohibits the landfill disposal of lead-acid batteries. Lead-acid batteries should be carefully removed when the vehicle first arrives at the site and then be stored in a manner that minimizes exposure to rain and snow and prevents acid or lead releases to the environment.

Mercury Switches

Some vehicles with trunk or engine compartment lights may have mercury switches. It is advised that these devices be removed, properly stored, and the materials be recycled so they are not released during the auto salvaging, crushing, or recycling process.

Antifreeze

Antifreeze is toxic to animals and humans. The Department encourages recycling of used antifreeze whenever possible. If recycling used antifreeze is not practical, disposal of limited amounts of used antifreeze to a Publicly Owned Treatment Works (POTW) system may be allowed, contingent upon approval from the local POTW authority. Antifreeze should be stored in containers labeled "Used Antifreeze" and should not be mixed with used oil.

Fuel

Handling fuel requires caution to prevent spills, explosions, and fires, as well as skin and inhalation hazards. Fuels should be removed as soon as possible after the vehicles have entered the facility. Gasoline and diesel fuel should be stored in separate containers and the containers should be appropriately labeled. For more information concerning the proper storage of fuel in aboveground storage tanks, contact your local fire department or the State Fire Marshal's office at 701-328-5555. The Department recommends using fuels for their intended purposes. If the fuel is unusable because of age or contaminants, check with an used oil outlet to see if it can be mixed with used oil for recycling. The waste fuel, if not recycled, must be handled according to appropriate waste regulations. For more information concerning the proper reuse or disposal of waste fuel, contact the Division of Waste Management.

Refrigerant

Refrigerant containing fluorocarbons (CFCs, HCFCs, and HFCs) can cause air pollution and federal law prohibits it being vented to the atmosphere. Prior to dismantling or crushing an air conditioning or refrigeration system, refrigerant must be recovered. It is advised that refrigerant be removed as soon as possible after equipment is received. The facility might consider having the owner provide certification that the refrigerant has been removed before the facility will accept the item. Once the refrigerant has been recovered, it must be recycled or reclaimed. Collected refrigerant should be stored in containers that meet Department of Transportation or Underwriters Laboratories standards. For more information concerning the proper handling of refrigerants, contact the Division of Air Quality at 701-328-5188.

PCBs (Polychlorinated Biphenyl-Containing Devices)

PCBs are toxic and cause cancer. Possible PCB-containing devices such as light ballasts, capacitors, fluid-filled dielectric transformers, etc., if accepted, must be properly handled. Salvage facilities accepting fluid-filled dielectric transformers must have PCB analysis or manufacturer's documentation on file. Smaller light ballasts, capacitors, etc., should be properly disposed and should not be damaged, crushed, shredded, or burned. PCB-containing fluids must not be spilled or mixed with other oils or materials. Contact the Department at 701-328-5166 for any questions regarding these matters.

Tires

Unusable tires continue to be a problem waste for North Dakota. Besides being a waste that is difficult to landfill, tire piles may pose a health threat by providing a vector- (mosquitoes, rats, snakes, skunks, mice) breeding habitat. Tire piles pose environmental hazards if they catch fire, thereby releasing contaminants to the atmosphere and possibly to surface and ground water.

State rules require all tire piles to have: (1) controlled access, (2) a location accessible by fire and emergency equipment, and (3) provisions by the owner or operator for recycling or disposal of the tires. The North Dakota Solid Waste Management Rules allow for a Permit-by-Rule for accumulations of up to 1,300 tires (which are equivalent to approximately one semitrailer load). Larger piles require formal permits. The easiest management option is to properly recycle or dispose tires as they are generated.

Scrap tire recycling is developing in North Dakota. Landfilling tires at a permitted waste management facility is allowed if the landfill will accept them.

For more information concerning scrap tires, tire haulers, recyclers, and permits, contact the Division of Waste Management.

Vehicle Crushing

Prior to crushing or shredding vehicles and other materials, batteries, mercury switches and all liquids must be removed. Crushing should occur at a designated location, above an impermeable surface where stormwater controls are in place, such as a constructed drip pad. Impermeable surfaces include, but are not limited to, concrete, asphalt concrete, and relatively thick clay-type soils. Leaks or spills should be cleaned as soon as possible or at the end of the day.

Miscellaneous Solid Waste

The Department recommends placing a dumpster at the salvage facility for storing household-type wastes, automobile plastics, upholstery, tires, etc. The waste should then be disposed at a permitted landfill. Salvage operators should contact the landfill facility to determine what waste acceptance procedures apply. On-site disposal or stockpiling of solid waste is subject to the state solid waste rules and normally requires a permit.

Material Handling and Storage

Workers handling any of the materials listed above are advised to be careful and use appropriate personal protective equipment to avoid exposure. Workers handling materials (for instance, lead-bearing batteries) should wash their hands before eating, drinking, smoking, etc. Workers should remove contaminated clothing before they go into their homes. Storage of wastes and products must be in leak-proof and labeled containers in a secure area. The Department recommends inspecting storage containers for leaks and/or spills weekly. Filled containers should be processed or picked up by a recycler or disposal firm on a regular basis to avoid stockpiles of materials.

Further information regarding safety and health may be obtained by contacting the Bismarck Area OSHA office at 1-800-473-7419 or the North Dakota On-Site Consultation Program at 1-701-328-9841.

Stormwater Management

Facilities such as scrap yards, battery recycling facilities, salvage yards, and auto salvage yards are required to obtain coverage under the North Dakota Pollutant Discharge Elimination System (NDPDES) permit program for stormwater discharges. For more information concerning stormwater management, contact the Division of Water Quality at 701-328-5210. Best management practices are to be implemented at salvage facilities which include, but are not limited to, the following:

- Stormwater (run-on) should be diverted around the facility to prevent possible contamination.

- Stormwater runoff from the facility should, at a minimum, be monitored for a visible sheen. Stormwater that displays a visible sheen has probably come into contact with a petroleum product.

- Storage of any materials should not be closer than one hundred feet (100 feet) to surface water.

- Exposure of parts, fluids, and waste to stormwater should be eliminated or minimized.

Wastewater Management

Domestic wastewater from sinks, toilets, etc., at a facility should go to a city sanitary sewer, a holding tank or a septic tank/drain field. Oils, fuels, antifreeze, battery acid, solvents, and other contaminants that are generated on-site should be handled as addressed in this document. The facility may be advised to install an oil/water separator.

Conclusion

Auto and metal salvage facilities provide an important service to our society. By following a few practices, impacts to human health and the environment can be avoided. The following are additional related guidance documents available from the Division of Waste Management:

1. Guideline 15 - Recycling Large Metal Appliances and Other Scrap Metal
2. Management Outlines for: Used Antifreeze; Used Oil Collection Centers; Sump and Pit Wastes; and Polychlorinated Biphenyls (PCB) Wastes
3. Used Oil Jobbers/Haulers List
4. Used Oil Regulations (33-24-05-600 through 33-24-05-689)

Specific questions may also be directed to the following Environmental Health Section Divisions:

1. The Division of Waste Management, 1200 Missouri Avenue, Room 302, PO Box 5520, Bismarck, N.D. 58506-5520, (701-328-5166);
2. The Division of Air Quality, 1200 Missouri Avenue, Room 304, PO Box 5520, Bismarck, N.D. 58506-5520, (701-328-5188); and
3. The Division of Water Quality, 1200 Missouri Avenue, Room 203, PO Box 5520, Bismarck, N.D. 58506-5520, (701-328-5210).